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ABSTRACT

This paper discusses Role and Reference Grammar (RRG), which is a structuralist-formalist theory of grammar. RRG grew out of an attempt to answer two fundamental questions: (1) what would linguistic theory look like if it were based on the analysis of Lakhota, Tagalog, and Dyirbal, rather than on the analysis of English?; and (2) how can the interaction of syntax, semantics, and pragmatics in different grammatical systems best be captured and explained? It is suggested here that RRG illustrates one possible answer to these questions, and that it shows that it is possible to have a rigorous, typologically-sensitive grammatical theory that takes semantics and pragmatics as central features. It has attempted to deal not only with the issues that have interested typologists and functionalists. Recent work has proposed a functional account of subadjacency that relies crucially on interactions among the linking system, focus structure, and syntactic structure. (JL)

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ROLE AND REFERENCE GRAMMAR

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1 Introduction*

Role and Reference Grammar [RRG] (Van Valin 1993a) may be termed a "structural-functionalist theory of grammar"; this locates it on a range of perspectives from extreme formalist at one end to radical functionalist at the other. RRG falls between these two extremes, differing markedly from each. In contrast to the extreme formalist view, RRG views language as a system of communicative social action, and consequently, analyzing the communicative functions of morphosyntactic structures has a vital role in grammatical description and theory from this perspective. Language is a system, and grammar is a system in the traditional structuralist sense; what differentiates the RRG conception of grammar from the standard formalist one is the view that grammatical structure can only be understood and explained with reference to its semantic and communicative functions. Syntax is not autonomous; rather it is viewed as relatively motivated by semantic and pragmatic factors. In terms of the abstract paradigmatic and syntagmatic relations that define a structural system, RRG deals not only with relations of cooccurrence and combination in strictly formal terms but also with semantic and pragmatic cooccurrence and combinatory relations. Hence RRG may be properly designated as a structural-functionalist theory, rather than purely formalist or purely functionalist.

2 Historical background

RRG grew out of an attempt to answer two fundamental questions:

- i) what would linguistic theory look like if it were based on the analysis of Lakhota, Tagalog and Dyirbal, rather than on the analysis of English?, and

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- ii) how can the interaction of syntax, semantics and pragmatics in different grammatical systems best be captured and explained?

These questions reflect issues that were prominent in the mid-1970's in some strands of American linguistics. Dixon's grammar of Dyirbal and Schachter & Otnes' grammar of Tagalog had been published in 1972, and the implications of these languages for linguistic theories were just being recognized. Furthermore, the Prague School and Hallidayan ideas regarding the role of discourse-pragmatics in grammar were being explored from a number of different perspectives. Many of the typological issues, e.g. the universality of the notion of "subject", and theoretical issues, e.g. the relation between "subject" and "topic" in grammatical systems, were central in the initial conceptualization of RRG, and this is reflected in the early work on the theory (Foley & Van Valin 1977, Van Valin 1977a,b, 1980, 1981, Van Valin & Foley 1980).

The theory from which RRG is most directly descended is Fillmore's (1968) Case Grammar. As in Fillmore's model, there is a semantic representation employing semantic case roles which is mapped into the syntactic surface structure, without any intervening level of syntactic representation. The details of the mapping differ substantially, however, and one prime difference is that in RRG discourse-pragmatic factors may play a role in the mapping. The RRG theory of clause structure follows the insight of Fillmore's division of the clause into "modality" and "proposition" by treating predicates, arguments and their modifiers distinctly from grammatical categories such as tense, aspect, modality and mood. Finally, RRG, like Fillmore, does not assume grammatical relations to be universal.

3 Central concepts of the theory

3.1 Clause structure

RRG rejects the standard formats for representing clause structure (grammatical relations, X-bar syntax), because they are not universal and hence necessarily impose aspects of structure on at least some languages where it is not appropriate. The RRG conception of clause structure (originally proposed in Foley & Van Valin 1984 and further refined in Van Valin 1993a), the LAYERED STRUCTURE OF THE CLAUSE [LSC], is made up of the NUCLEUS, which contains the predicate(s), the CORE, which contains the nucleus plus the arguments of the predicate(s), and the PERIPHERY, which contains adjunct temporal and locative modifiers of the core. These aspects of the LSC are universal; in addition, some languages have a PRE-CORE SLOT [PCS], which is the position of WH-words in languages like English and Icelandic, and a LEFT-DETACHED POSITION, [LDP], which is the position of the pre-clausal element in a left-dislocation construction. Each of the major layers (nucleus, core, clause) is modified by one or more OPERATORS, which include grammatical categories such as tense, aspect, modality and evidentiality. In the formal representation of the LSC (proposed in Johnson 1987), operators are represented in a distinct projection of the clause from the predicates and arguments. This is presented in Figure 1.

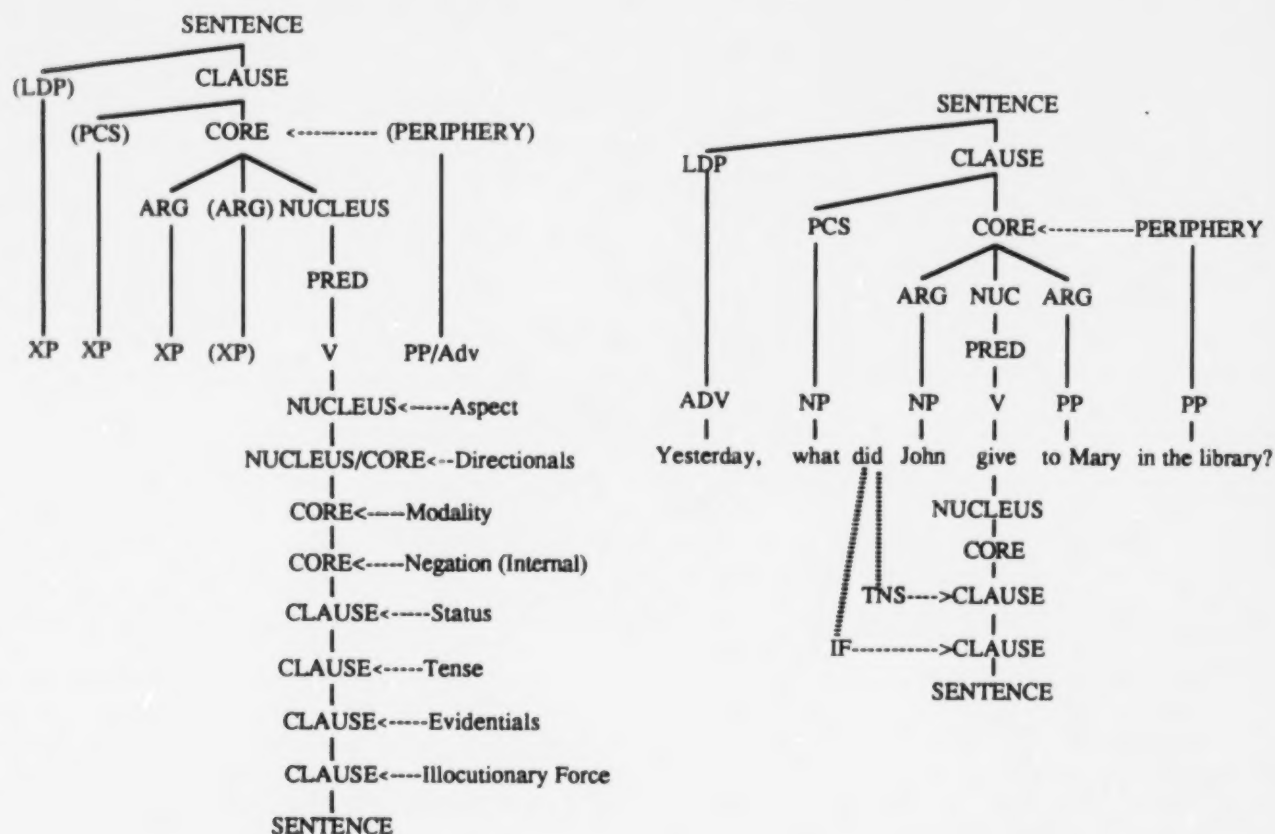


Figure 1

Representations such as these should be viewed as *constructional templates*; the inventory of these templates in a language constitutes an important component of its grammar. The LSC applies equally to fixed word-order and free word-order languages, to head-marking and dependent-marking languages, and to languages with and without grammatical relations.¹

The three central components of the LSC also turn out to be the three fundamental building blocks of complex sentences in human language. The unmarked pattern for the construction of complex sentences involves combining nuclei with nuclei, cores with cores, or clauses with clauses. These are called levels of *JUNCTURE* in RRG, i.e. nuclear juncture, core juncture and clausal juncture. Examples of nuclear, core and clausal juncture from English are given in (1).²

- (1)
- a. Fred pushed the door open. [two nuclei, *push* and *open*, in a single core]
 - b. Fred persuaded Bill to open the door. [two cores, *Fred persuaded Bill* and *Bill open the door*, in a single clause]
 - c. Fred talked to Mary, and she agreed with his suggestion. [two clauses in a single sentence]

Of equal importance in the RRG theory of complex sentences is the set of possible syntactic and semantic relations between the units in a juncture.³ The syntactic relations between units are called NEXUS relations in RRG. Traditionally, only two basic nexus relations are recognized, coordination and subordination, but RRG, following Olson's (1981) analysis of clause linkage in Barai (a Papuan language), posits three nexus types: coordination, subordination, and COSUBORDINATION, which is essentially dependent coordination. Subordination and cosubordination are illustrated in (2) with examples of clausal juncture from English; (1c) is an example of clausal coordination.

- (2)
- a. Max called Sue, because he was going to be late for the party.
[Subordination]
 - b. Having called Sue, Max left for the party.
[Cosubordination]

The three levels of juncture combine with the three nexus types to generate nine possible complex sentence types. Not all of them are instantiated in every language, and the types found in a language may be realized by more than one formal construction type. The nine juncture-nexus types may be ordered into a hierarchy in terms of the tightness of the syntactic link between the units (see the hierarchy in Figure 2 in section 3.2).

3.2 Semantic structure

The heart of the RRG approach is the system of lexical representation and semantic roles. The system of lexical representation is based on the scheme for lexical decomposition proposed in Dowty (1979), which is in turn based on Vendler's (1967) classification of verbs into states, activities, achievements and accomplishments. Examples of each class and their formal representation are given in (3).

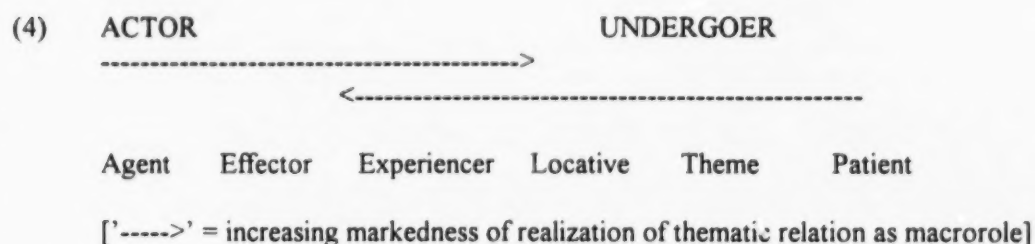
- (3)
- | | | |
|--------------------|----------------------|--|
| a. State: | The lamp is broken. | broken' (the lamp) |
| b. Achievement: | The lamp broke. | BECOME broken' (the lamp) |
| c. Accomplishment: | Bill broke the lamp. | [do' (Bill, Ø)] CAUSE [BECOME broken' (the lamp)] |
| d. Activity: | The lamp is shaking. | do' (the lamp, [shake' (the lamp)]) |

A crucial component of this system is a set of syntactic and semantic tests for determining the class membership of a verb in a particular sentence, since the class of the verb determines its lexical representation or LOGICAL STRUCTURE [LS] (see Van Valin 1993a:35). Examination of the verbal systems of a number of languages led to the

conclusion that this set of distinctions is one of the fundamental organizing principles of verbal systems in human language.⁴

The RRG theory of semantic roles is rather different from that of other theories, in that it posits two types or tiers of semantic roles. The first are specific thematic relations, the traditional (since Fillmore and Gruber 1965) notions of agent, theme, patient, experiencer, etc. The second are generalized semantic roles called SEMANTIC MACROROLES; they were introduced in Van Valin (1977b) and have no analog in other theories. Following the ideas of Gruber (1965) and Jackendoff (1976), RRG derives thematic relations from argument positions in LSs such as those in (3); this is summarized in Figure 4 in section 3.4. Because the LS of a verb is determined by syntactic and semantic tests which make no reference to thematic relations, the assignment of thematic relations to a verb is independently motivated in RRG.

The second type of semantic role plays a crucial role in the theory; macroroles act as the primary interface between the LS and syntactic representations. There are only two macroroles, ACTOR and UNDERGOER, corresponding to the two primary arguments in a prototypical transitive relation. They are called "macroroles" because each subsumes a number of specific thematic relations; the relationship between the two tiers is captured in the Actor-Undergoer Hierarchy in (4).



Given the LS of a verb, the most agent-like argument will be actor, the most patient-like undergoer, in the default case. Macroroles are not equivalent to grammatical relations; this is illustrated in (5).

- (5)
- a. The boy [SUBJ, ACTOR] ate the sandwich [OBJ, UNDERGOER].
 - b. The sandwich [SUBJ, UNDERGOER] was eaten by the boy [ACTOR].
 - c. The girl [SUBJ, ACTOR] ran down the stairs.
 - d. The girl [SUBJ, UNDERGOER] got sick.

The exact role of thematic relations and macroroles in the mapping (or linking) between semantic and syntactic representations will be sketched in section 3.4 and summarized in Figure 4.

As mentioned in the previous section, an important component of the theory of

complex sentences is the semantic relations that obtain between units in a juncture. These include causality, psych-action, direct perception, cognition, propositional attitude, conditional, and varieties of temporal sequence. These may be ordered into a hierarchy in terms of whether the units in the juncture express facts of a single event, state or action or distinct events, states or actions. This semantic hierarchy interacts with the syntactic hierarchy of juncture-nexus types as follows: there is an iconic relation between the semantics and syntax of clause linkage, such that the tightness of the syntactic linkage directly reflects the semantic integration of the units in the linkage. This is expressed in the Interclausal Relations Hierarchy in Figure 2.

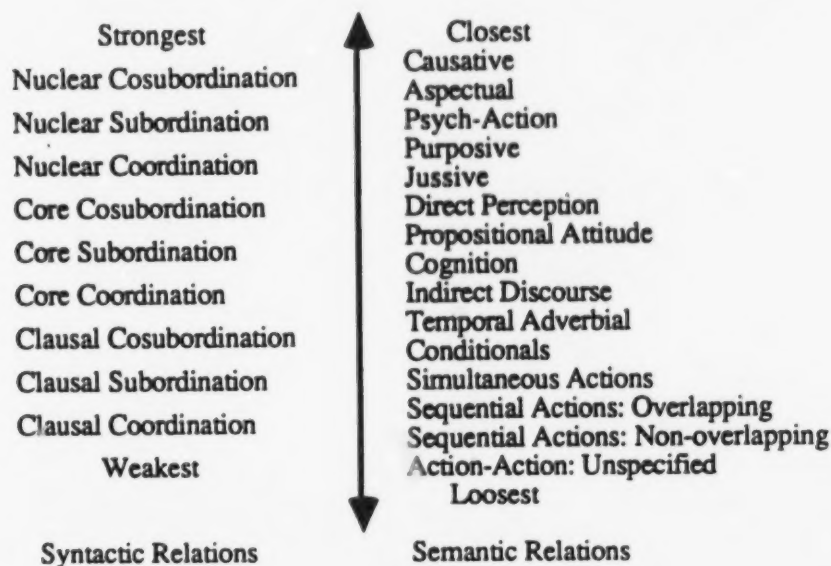


Figure 2

3.3 Focus structure

The issue of the distribution of information in clauses and sentences was not addressed in Foley & Van Valin (1984), and Van Valin (1993a) integrates Lambrecht's (1986, 1987, in press) theory of FOCUS STRUCTURE into RRG. Focus structure is the grammatical system which serves to indicate the scope of the assertion in an utterance in contrast to the pragmatic presupposition, and it is vital to the RRG analysis of many grammatical phenomena. The focus structure of an utterance is represented in a projection of the clause which is distinct from the operator and constituent projections; this is exemplified in Figure 3.

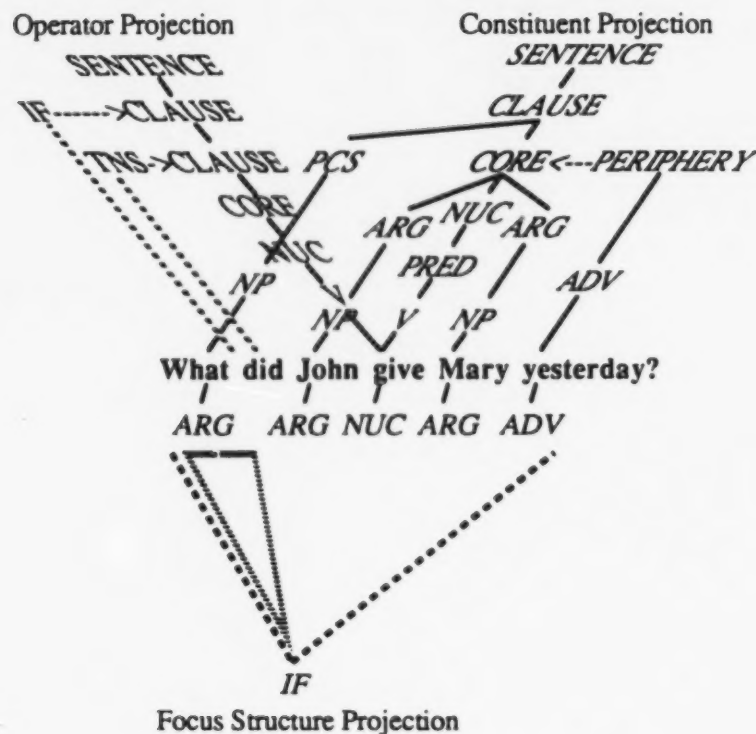


Figure 3

3.4 Grammatical relations and linking

In the earliest work on RRG it was argued that grammatical relations like subject and direct object are not universal and cannot be taken as the basis for adequate grammatical theories. In place of these notions, RRG employs the notion of syntactic pivot, which is a construction-specific relation and is defined as a restricted neutralization of semantic roles and pragmatic functions for syntactic purposes. The other arguments in a clause are characterized as direct or oblique core arguments; there is nothing in RRG corresponding to direct or indirect object.

The linking system relating semantic and syntactic representations is summarized in Figure 4. Syntactic functions like pivot and direct core argument (which are structurally instantiated in the LSC) represent the syntactic pole of the system, while LSs represent the

semantic pole. The linking between LSs and macroroles is universal, and cross-linguistic variation, e.g. accusative vs. ergative syntactic systems, is located in the mapping between macroroles and syntactic functions.

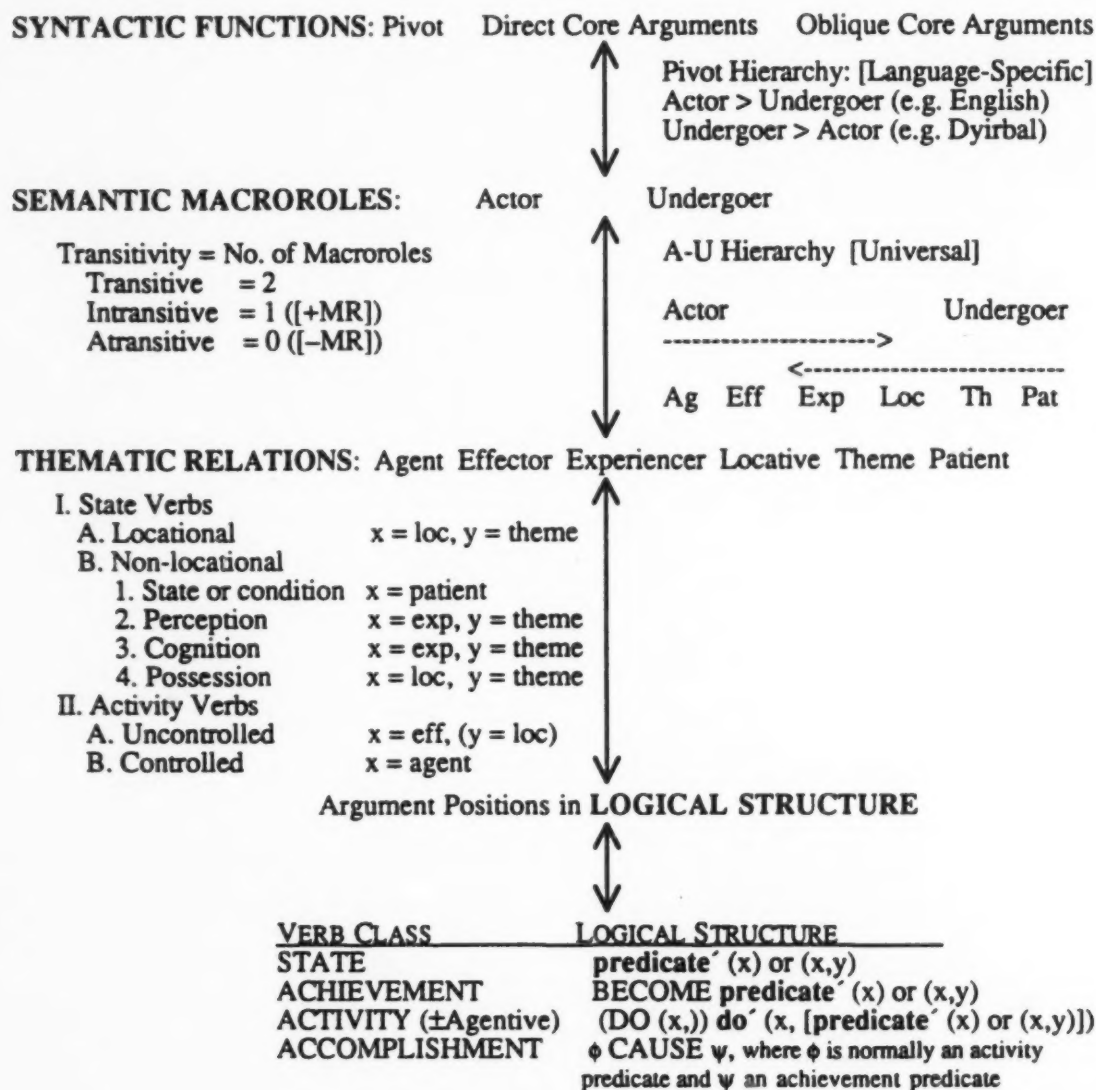


Figure 4

One of the questions which RRG asks is, when there is an option as to which arguments can be linked to pivot, what factors can affect the choice? It turns out that the answer to this question has important typological ramifications, for some languages permit discourse-pragmatic factors to play a role, whereas others do not. This distinction is expressed in the RRG typology of "role-dominated" (no discourse-pragmatic influence on linking) vs. "reference-dominated" (possible discourse-pragmatic influence on linking) languages, and in the contrast between SEMANTIC PIVOTS vs. PRAGMATIC PIVOTS (which are found only in reference-dominated languages), two subtypes of syntactic pivot.

4 Some implications of RRG

RRG illustrates one possible answer to the questions stated at the beginning of section 2, and it shows that it is possible to have a rigorous, typologically-sensitive grammatical theory which takes semantics and pragmatics as central features. It has attempted to deal not only with the issues that have interested typologists and functionalists, e.g. universality of grammatical relations, but also with some of the leading questions raised by formal theories, e.g. extraction restrictions (subjacency). Recent work (Van Valin 1993a,b) has proposed a functional account of subjacency which relies crucially on interactions among the linking system, focus structure, and syntactic structure. In addition, RRG has been shown to provide a potentially explanatory framework for the study of language acquisition and child language (Van Valin 1991, in press, Rispoli 1991a,b).

NOTES

* This paper will appear in the *Instrumentarium* volume of the *Handbook of Pragmatics* to be published by the International Pragmatics Association. The conditions of the contract stipulated 2,000 words for the length of the article, and the paucity of argumentation, explanation and documentation are a function of this limit. See Van Valin (1993a) for a full exposition of the theory.

1 It is assumed that noun phrases and adpositional phrases have a comparable layered structure; see Van Valin (1993a), §1.7

2 While it is alien to the typological, universalist character of RRG to give examples only from English, the severe space constraints imposed on this article make this necessary as a space-saving strategy.

3 The semantic relations will be discussed in section 3.2 below.

4 For further development of this decompositional system, see Van Valin & Wilkins (1993), Wilkins & Van Valin (1993).

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